

EXHIBIT A: JOINT CLAIM CONSTRUCTION CHART

U.S. Patent No. 7,372,909				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
1. A radio transmitting apparatus, for transmitting an OFDM multicarrier signal comprising a first plurality of subcarriers and a second plurality of subcarriers , said radio transmitting apparatus comprising:	"an OFDM multicarrier signal comprising a first plurality of subcarriers and a second plurality of subcarriers" (Claim 1)	This portion of the preamble is limiting, and should be construed as: "an orthogonal frequency division multiplexed multicarrier signal comprising a first plurality of subcarriers and a second plurality of subcarriers"	The disputed preamble language is limiting, and should be construed as "an orthogonal frequency division multiplexed multicarrier signal that is not time division multiplexed comprising a first plurality of subcarriers and a second plurality of subcarriers"	

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<p>an assigning section operable to assign a data channel to the first plurality of subcarriers of the multicarrier signal and to assign a control channel to the second plurality of subcarriers of the multicarrier signal, wherein the second plurality of subcarriers are located between the first plurality of subcarriers on a frequency axis and the center frequency of the data channel and the center frequency of the control channel are common,</p> <p>an up-conversion section operable to up-convert the multicarrier signal to a carrier frequency; and</p> <p>a transmitter operable to transmit the up-converted multicarrier signal.</p>				

U.S. Patent No. 8,077,594				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
<p>1. A base station apparatus comprising:</p> <p>a receiving unit configured to receive a Sounding Reference Signal (SRS) that is mapped to a position of a guard time in a subframe, in which a random access preamble is transmitted, and that is transmitted from a mobile station apparatus, the guard time during which nothing is transmitted being added to the last of the random access preamble, and a cyclic prefix being added to the beginning of the random access preamble; and</p> <p>a demodulating unit configured to demodulate the received SRS,</p>	<p>“a position of a guard time in a subframe” (Claim 1)</p>	[AGREED]	[AGREED]	<p>“a position of a guard time in a subframe as received at the base station”</p>
	<p>“a Sounding Reference Signal (SRS)” (Claim 1)</p>	[AGREED]	[AGREED]	<p>Plain and ordinary meaning</p>
	<p>“receive a Sounding Reference Signal (SRS) that is mapped to a position of a guard time in a subframe, in which a random access preamble is transmitted, and that is transmitted from a mobile station apparatus, the guard time during which nothing is transmitted being added to the last of the random access preamble” (Claim 1)</p>	[AGREED]	[AGREED]	<p>Plain and ordinary meaning (except for any sub-terms or phrases that may be construed)</p>

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wherein the random access preamble is a preamble sequence selected from a set of preamble sequences, and wherein the guard time is of a given time length.	“the guard time is of a given time length” (Claim 1)	[AGREED]	[AGREED]	“the guard time is of a predetermined time length”
	“the guard time during which nothing is transmitted” (Claim 1)	“the guard time during which nothing is transmitted by the device transmitting the random access preamble”	“the guard time during which nothing except the SRS is transmitted”	
	“subframe” (Claim 1)	Plain and ordinary meaning	“a 1 millisecond time period in a frame”	
9. The base station apparatus according to claim 1, wherein said receiving unit receives the SRS at a constant period in at least part of subframes in which random access preambles are transmitted.	“wherein said receiving unit receives the SRS at a constant period in at least part of subframes in which random access preambles are transmitted” (Claim 9)	[AGREED]	[AGREED]	Plain and ordinary meaning

U.S. Patent No. 8,085,724				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
<p>12. A sequence reporting apparatus comprising:</p> <p>an allocating section configured to allocate at least one of sequences with consecutive indices among a plurality of sequences, which are indexed by the indices having consecutive numbers in order of generally increasing to a maximum value and then decreasing, from the maximum value, a required cyclic shift amount according to a sequence number; and</p> <p>a reporting section configured to report the index of the allocated sequence.</p>	<p>“a plurality of sequences, which are indexed by the indices having consecutive numbers in order of generally increasing to a maximum value and then decreasing, from the maximum value, a required cyclic shift amount according to a sequence number” (Claim 12)</p>	<p>“a plurality of sequences, which are indexed by the indices having consecutive numbers, such that the sequences are indexed according to a sequence number in order of generally increasing required cyclic shift amount to a maximum value and then generally decreasing required cyclic shift amount from the maximum value”¹</p>	<p>Indefinite because the included terms (addressed separately) are indefinite.</p>	
	<p>“the indices having consecutive numbers in order of generally increasing to a maximum value and then decreasing, from the maximum value” (Claim 12)</p>	<p>Not indefinite; should be construed according to the composite term</p>	<p>Indefinite</p>	

¹ IP Bridge adopted this alternate construction in its Reply Brief (*see* Dkt. 76, n.3).

U.S. Patent No. 8,085,724				
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	"a required cyclic shift amount according to a sequence number" (Claim 12)	Not indefinite; should be construed according to the composite term	Indefinite	
13. The sequence reporting apparatus according to claim 12, wherein the required cyclic shift amount is a required cyclic shift amount for a mobile station moving at high speed.	"the required cyclic shift amount is a required cyclic shift amount for a mobile station moving at high speed" (Claim 13)	Plain and ordinary meaning	Indefinite	

U.S. Patent No. 8,385,239				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
14. A base station comprising:	"the mobile station" (Claim 14)	[AGREED]	[AGREED]	Plain and ordinary meaning

U.S. Patent No. 8,385,239				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
a transmitter configured to transmit a control channel signal to a mobile terminal, wherein the control channel signal comprises a Modulation and Coding Scheme (MCS) Index, information on resource blocks used for a transmission from the mobile terminal to the base station, and a channel quality indicator trigger for triggering a transmission of an aperiodic channel quality indicator report from the mobile station to the base station, and	"determined value" (Claim 14)	[AGREED]	[AGREED]	Plain and ordinary meaning
	"the aperiodic channel quality indicator report is multiplexed with data transmitted by the mobile terminal" (Claim 14)	"the aperiodic channel quality indicator report is multiplexed with user data transmitted by the mobile terminal"	Plain and ordinary meaning of the term "with data"	
	"the aperiodic channel quality indicator report is not multiplexed with data transmitted by the mobile terminal" (Claim 14)	"the aperiodic channel quality indicator report is not multiplexed with user data transmitted by the mobile terminal"	Plain and ordinary meaning of the term "with data"	

<p>a receiver configured to receive from the mobile terminal the aperiodic channel quality indicator report when the channel quality indicator trigger is set, wherein the aperiodic channel quality indicator report is not multiplexed with data transmitted by the mobile terminal via an Uplink Shared Channel (UL-SCH) in case when the control channel signal indicates a determined value of the MCS Index and also indicates a number of resource blocks that is smaller than or equal to a determined number of resource blocks, and wherein the aperiodic channel quality indicator report is multiplexed with data transmitted by the mobile terminal via the UL-SCH, in case (a) when the control channel signal does not indicate the determined value of the MCS Index, or in case (b) when the control channel does not indicate a number of resource blocks that is smaller than or equal to</p>				
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U.S. Patent No. 8,385,239				
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the determined number of resource blocks.				

U.S. Patent No. 8,526,546				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
7. The radio communication method according to claim 6, wherein	“format for communicating CQI signals” (Claims 7-8)	[AGREED]	[AGREED]	Plain and ordinary meaning
	“a physical resource, which supports a mixture of a format for communicating an ACK/NACK signal and a format for	[AGREED]	[AGREED]	Plain and ordinary meaning

U.S. Patent No. 8,526,546				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
<p>a physical resource, which supports a mixture of a format for communicating an ACK/NACK signal and a format for communicating CQI signals, is used to receive the ACK/NACK signal and the first reference signals (1st RS) arranged in the ACK/NACK signal transmission slot or the CQI signals and the second reference signals (2nd RS) arranged in the COI signals transmission slot.</p> <p>8. The radio communication method according to claim 7, wherein</p>	communicating CQI signals” (Claim 7)			
	“format for communicating an ACK/NACK signal” (Claims 7-8)	[AGREED]	[AGREED]	Plain and ordinary meaning

U.S. Patent No. 8,526,546				
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in said physical resource block, the format for communicating an ACK/NACK signal is associated with a sequence defined by a first cyclic shift value and the format for communicating CQI signals is associated with a sequence defined by a second cyclic shift value different from the first cyclic shift value.				

U.S. Patent No. 9,137,000				
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11. A base station comprising:	"subcarrier block" (Claim 11)	[AGREED]	[AGREED]	Plain and ordinary meaning

U.S. Patent No. 9,137,000				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
<p>a transmitter configured to transmit control information indicating whether a mobile station is to transmit one channel quality indicator (CQI) for each subcarrier block within a communication frequency band or one CQI for all subcarrier blocks within the communication frequency band instead of multiple CQIs for multiple subcarrier blocks within the communication frequency band; and</p> <p>a receiver configured to receive one CQI for each subcarrier block within the communication frequency band or 5 one CQI for all subcarrier blocks within the communication frequency band from the mobile station according to the control information.</p>				

U.S. Patent No. 9,769,820				
Claim Language	Term/Phrase/Clause	IP Bridge's Construction	Defendants' Construction	Court's Construction
<p>4. A Base Station (BS) comprising:</p> <p>a transceiver configured to transmit and receive radio signals; and</p> <p>a processor connected to the transceiver,</p> <p>wherein the processor is configured to transmit a Physical Downlink Shared Channel (PDSCH) to a user equipment (UE); and</p> <p>transmit an Enhanced Physical Downlink Control Channel (EPDCCH) to the UE,</p>	<p>“starting OFDM symbol for the EPDCCH is an OFDM symbol next to a Physical Downlink Control Channel (PDCCH) region” (Claim 4)</p>	[AGREED]	[AGREED]	<p>“starting OFDM symbol for the EPDCCH is an OFDM symbol next to a Physical Downlink Control Channel (PDCCH) region in time”</p>

U.S. Patent No. 9,769,820				
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<p>wherein, if position information informing of a starting orthogonal frequency division multiplexing (OFDM) symbol of the EPDCCH is configured to the UE through a radio resource control (RRC) message, the starting OFDM symbol for the EPDCCH corresponds to the position information within the RRC message,</p> <p>wherein, if the position information is not configured to the UE through the RRC message, the starting OFDM symbol for the EPDCCH is an OFDM symbol next to a Physical Downlink Control Channel (PDCCH) region checked through a Physical Control Format Indicator Channel (PCFICH), and</p>				

U.S. Patent No. 9,769,820				
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wherein, if the PDSCH is assigned by the EPDCCH in a same serving cell, a starting OFDM symbol for the PDSCH and a starting OFDM symbol for the EPDCCH are the same.				